ON THE SCIENTIFIC NAME OF THE LONGLEAF PINE[1]

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The Longleaf Pine of the southeastern United States has been spared the numerous changes in scientific name that have cast confusion over many of our other tree species. From pioneer days the dominant practice, both among botanists and foresters, has been to apply the name *Pinus palustris* Mill. to the Longleaf. Prior to the 1940's the only author of significance to do otherwise was J. K. Small (1933) who interpreted *P. palustris* Mill. to be the northern variety of slash pine, *P. elliottii* Engelm. Small's *Manual of the Southeastern Flora,* however, achieved only regional impact, and his use of *P. australis* Michx. f. for the Longleaf did not gain a wide following.

A much stronger impetus for associating the Longleaf with *Pinus australis* was generated in 1948 by M. L. Fernald who advocated this name in two detailed and strongly worded articles (Fernald & Schubert, 1948; Fernald, 1948). Fernald's position was reinforced by the publication of his monumental reworking of *Gray's Manual of Botany* (1950), and was further entrenched when the independent H. A. Gleason adopted the same name in his *New Britton and Brown Illustrated Flora* (1952) as did A. Cronquist in their companion field guide, the *Manual of Vascular Plants of Northeastern United States and Adjacent Canada* (Gleason & Cronquist, 1963). These three publications totally dominate the field of regional floras in the Northeast, and their consistent use of *Pinus australis* inevitably suggests that this name is supported by general professional agreement and by nomenclatural legitimacy.

Yet in publications other than these or their derivatives, the Longleaf remains known by the name *Pinus palustris*

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Mill. This is the name found in state or district floras such as the *Manual of the Vascular Flora of the Carolinas* (Radford et al., 1968), the *Manual of the Vascular Plants of Texas* (Correll & Johnston, 1970), and *A Flora of Tropical Florida* (Long & Lakela, 1971), as well as in the more basic modern treatments of the genus by Mirov (1967) and by Little & Critchfield (1969). The U. S. Forest Service, following the guidance of its dendrologist, E. L. Little, has remained steadfast with *P. palustris*, and the state forest services have done likewise.

The rationale behind Fernald's heterodox displacement of *Pinus palustris* was his view that Philip Miller (1768), superintendent of the Chelsea Physic Garden and British author of a series of widely used and authoritative horticultural dictionaries, did not have the Longleaf when he described an American tree under this name. The original description contained phrases that do not apply to the stately and versatile Longleaf: "I have been informed that they grow to a height of twenty-five or thirty feet. . . . I have not heard the wood was of any use but for fuel." However, Miller reported these statements as hearsay, not as observed fact, while his description also contained such passages as "Pine-tree with the longest leaves growing by threes out of each sheath" and "Their leaves are a foot or more in length, growing in tufts at the end of the branches, so have a singular appearance." These phrases were given without qualification and form a brief but unmistakable description of the Longleaf.

Fernald further relied on the habitat of *Pinus palustris* reported by Miller, "swamps in many parts of North America," as excluding the Longleaf. He proposed instead that Miller may have had the Loblolly Pine, *P. taeda* L. Actually however, although the Longleaf usually occurs on dry well-drained soils, it not uncommonly is found associated with the Slash Pine in the extensive level undrained swamps known as flatwoods and throughout its range probably occurs as frequently in wet soils as Fernald's proposed substitute, the Loblolly. Of couse, Miller's use of an epithet

meaning "swampy", even if it were totally unsuitable, would not be justification for discarding his *P. palustris;* Article 62 of the International Code of Botanical Nomenclature (Stafleu, 1972) provides that: "a legitimate name or epithet must not be rejected merely because it is inappropriate . . ."

No information is available from specimens preserved by Miller; Dr. Schubert examined the Miller collections of the British Museum and was unable to find a specimen that could be considered a type. Fernald, by correspondence, did locate a specimen he presumed to be of *P. taeda* that Miller may have seen and that someone, possibly Miller, had noted as "palustris." It seems improbable that Miller would have so misidentified *P. taeda* since this species was well known to him and was treated in some detail in the several editions of his "Dictionary."

Fernald did demonstrate at some length that the name *Pinus palustris* was not clearly understood and was even misused by Miller's contemporaries and other early workers, but this again does not provide justification for discarding the name. There seems to be essentially no sound rationale for interpreting this name to mean anything other than, in the conventional usage, the Longleaf Pine.

In the event, moreover, that Miller's brief but clear diagnosis should be considered ambiguous, no alternative name is available. *Pinus lutea* Walter, whimsically suggested by Fernald, is probably *P. taeda. Pinus australis* Michx. f. is unmistakably the Longleaf, and was selected as the correct name for this species by Small and by Fernald. Little (1948), however, accurately pointed out prior to the publication of Fernald's first paper on the subject, that Article 63 (then Article 60) of the International Code makes this name illegitimate since it was superfluous when published. Not only did Michaux (1810) cite *P. palustris* as a synonym, but he specifically explained that he was replacing this name with *P. australis,* using an epithet ("southern") that he thought more appropriate. It is precisely such actions as this that Article 63 is de-

signed to prevent, and Fernald's protestations that Michaux was "definitely defining a new species" are contradicted by Michaux' own words, in translation: "I have thought likewise that the specific name 'australis' was preferable to that of 'palustris', under which this species has been described by botanists; for this last gives an absolutely false idea of the nature of the soil where this tree grows."

The only other specific name apparently ever given the Longleaf was *Pinus longifolia* Salisb., but here again the epithet used was superfluous, for Salisbury (1796) was unabashedly providing a substitute name for *P. palustris* and thereby formed an illegitimate and unusable combination.

The person who would apply a scientific name to the Longleaf Pine, therefore, has the choice, should he wish to follow the Code, of either accepting Miller's brief description of *Pinus palustris* as adequate, or of discarding it as confused and coining and publishing a name of his own creation. Neither *P. australis* Michx. f. nor *P. longifolia* Salisb. may be legitimately used for this tree, and prudence and practicality, as well as historical precedent, indicate strongly the advisability of retaining the Longleaf Pine under the name *Pinus palustris* Mill.

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